## ABSTRACT OF THE DISCLOSURE

A high acceleration time shift control apparatus and method for a vehicle is provided. The high acceleration time shift control apparatus includes a transmission which achieves plural shift speeds whose gear ratios are different from each other; and a high acceleration time upshifting control device which changes a shift speed of the transmission to a higher speed based on a predetermined determination rotational speed such that an input rotational speed of the transmission substantially reaches a target maximum rotational speed when a request for high acceleration is made by a driver. The high acceleration time upshifting control device outputs an upshift command for performing an upshift when the determination rotational speed reaches a predetermined shift determination speed; calculates an actual ineffective time until shifting is actually started and the input rotational speed starts decreasing after the upshift command is output; computes a virtual maximum rotational speed, that is a maximum rotational speed when the input rotational speed changes at a reference rotational speed change rate, based on the input rotational speed when the upshift command is output, the ineffective time and the predetermined reference rotational speed change rate; and changes the shift determination speed such that the virtual maximum rotational speed comes close to the target maximum rotational speed and then performs learning.